

DMX3304 Applied Electronics

Level	3
Course Code	DMX3304
Course Title	Applied Electronics
Credit value	3
Core/Optional	Core
Course Aim/s	Aim of this course is to provide basic principles of electronic engineering and its applications
Course Learning Outcomes (CLO):	<p>At the completion of this course student will be able to:</p> <p>CLO1: Analyze currents and voltages in AC/DC circuits. CLO2: Describe the operation of balanced three phase circuits. CLO3: Solve different types of first/second order circuits and filters using ODE. CLO4: Analyze active components used in various electronics applications. CLO5: Design op-amp circuits for different applications. CLO6: Design combinational and sequential logic circuits. CLO7: Describe the operation of analogue to digital/ digital to analogue converters.</p>
Content	<p>Outline Syllabus:</p> <p>Unit 1: Network theorems Unit 2: Circuit analysis Unit 3: Semiconductor devices Unit 4: Digital Electronics</p> <p>Laboratory work:</p> <ol style="list-style-type: none"> 1. Determination of unknown resistance using Whetstone bridge (using AC and DC sources). 2. Determination of gain and identify the functions of each components in a BJT amplifier circuit. 3. Implementation of logic circuits using logic ICs. 4. Determination of characteristics of operational amplifiers 5. Electronics circuit simulation using software